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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,859	07/31/2001	Shigeoki Kayama	313KA/50252	9469

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EXAMINER

SICONOLFI, ROBERT

ART UNIT PAPER NUMBER

3683

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,859

Applicant(s)

KAYAMA ET AL.

Examiner

Robert A Siconolfi

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Amendment filed on 12/30/02 has been received.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman et al (U. S. Patent no. 5,674,011)

Hoffman et al is the admitted prior art of Figure 7 and is discussed in the specification on pages 6 and 7. This is also the only disclosure in the instant application of the coupling device, which is claimed in all of the independent claims. Axle unit having an

outside end that doesn't rotate, hub 9 with first spline section unnumbered, drive member 2 with second spline section 10 and an inside end forming the housing of the constant velocity joint, coupling member 8, rolling bodies 42, outer race 1, constant velocity joint unnumbered

Hoffman et al does not disclose the clearance angle between the first and second spline section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ranges claimed for the clearance angle as such is merely an optimization based on routine experimentation. Optimization based on routine experimentation is only patentable when the range is considered critical or the experimentation produces unexpected results (see MPEP 2144.05 and 716.02).

Regarding claims 7-9, as currently written the combination of a robot arm and the drive unit is being claimed. If the combination is not desired by the applicant, the claims must be rewritten in functional language. The examiner takes Official Notice that the use of robot arms to assembly parts for machines such as automobiles is well known and it is therefore obvious to one of ordinary skill in the art to use a robot arm to assemble the drive unit. Furthermore, the method disclosed in claims 8 and 9 depend off apparatus claims (2-4 and 7). As such the method steps are not given patentable weight.

5. Claims 1-4, and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art figure 8.

Prior art figure 8 is equivalent to figure 5 of the instant application. As argued by the applicant figure 5 shows the elements in claim 6 and therefore figure 8 which has the same structure will also read upon the claim.

Prior art Figure 8 does not disclose the clearance angle between the first and second spline section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ranges claimed for the clearance angle as such is merely an optimization based on routine experimentation. Optimization based on routine experimentation is only patentable when the range is considered critical or the experimentation produces unexpected results (see MPEP 2144.05 and 716.02).

Regarding claims 7-9, as currently written the combination of a robot arm and the drive unit is being claimed. If the combination is not desired by the applicant, the claims must be rewritten in functional language. The examiner takes Official Notice that the use of robot arms to assembly parts for machines such as automobiles is well known and it is therefore obvious to one of ordinary skill in the art to use a robot arm to assemble the drive unit. Furthermore, the method disclosed in claims 8 and 9 depend off apparatus claims (2-4 and 7). As such the method steps are not given patentable weight.

Response to Arguments

6. Applicant's arguments filed 12/30/02 have been fully considered but they are not persuasive. Applicant argues that the claimed range is critical because it allows easy assembly and low noise. The examiner disagrees. While easy assembly and low noise are worthy goals, the applicant has picked arbitrary standards to measure the criticality. A higher noise level than is chosen by the applicant (based on the claimed range) may be tolerated in order to allow lower costs. Likewise, the noise level may be required to be so low that a higher cost must be tolerated. It is merely a design choice based on the

intended use of the unit. If it is to be used in a high priced car, then a higher cost and a lower noise level is desirable. The reverse is true in a entry level vehicle.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A Siconolfi whose telephone number is (703) 305-0580. The examiner can normally be reached on M-F 10 am-3 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on (703) 308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Robert A Siconolfi
Examiner
Art Unit 3683

RS
March 9, 2003


JACK LAVINDER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600